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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/662,751

09/15/2003

James D. Goss

67397-036 PUS1

1549

54549

7590

07/31/2008

CARLSON, GASKEY & OLDS/PRATT & WHITNEY

400 WEST MAPLE ROAD

SUITE 350

BIRMINGHAM, MI 48009

EXAMINER

KRAUSE, JUSTIN MITCHELL

ART UNIT

PAPER NUMBER

3682

MAIL DATE

DELIVERY MODE

07/31/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/662,751

Applicant(s)

GOSS ET AL.

Examiner

JUSTIN KRAUSE

Art Unit

3682

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8, 10-12, 14-16, 26, 28, 32-35, 40 and 43-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8, 10-12, 14-16, 26, 28, 32-35, 40 and 43-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2008 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

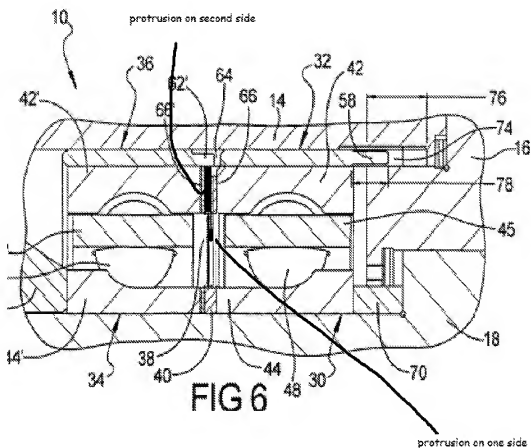
DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 9, 2008 has been entered.

Drawings

Upon further review of figure 6, the examiner believes to have located the protrusion of opposite sides of the spring.



The spring, in the examiner's view, is illustrated above in black. If this is the case, then the original drawing should be filed, with proper cross hatching. Amended figure 6 as filed July 9, 2008 will not be entered as it deviates significantly from what was originally illustrated. Figure 2 filed on November 27, 2007 should also be filed in response to this Office Action. No other drawings filed November 27, 2007 will be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 40 objected to because of the following informalities: claim 40 recites a generally "planar" spring, which elsewhere in the claims has been amended to be "flat". Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8, 10-12, 14-16, 26, 28, 32-35, 40, and 43-51, are rejected under 35 U.S.C.

103(a) as being unpatentable over Baninger (US Patent 1,851,561) in view of Vogelsberger et al (US Patent 5,624,193).

Baninger discloses a bearing assembly comprising:

- a first bearing having first inner race (68) and a first outer race (80)
- a first bearing cup (84) disposed at least partially around the first bearing and secured to the first outer race, including a tang (90) and a plurality of teeth (88)
- a plurality of first rolling elements disposed between the first inner and outer races (76)
- a second inner race (70) and a second outer race (82)
- a second bearing cup (86) mounted at least partially about the second outer race secured to the second outer race and including a plurality of teeth and slots (88)
- a second plurality of rolling elements (78) disposed between the second inner and outer races
- the first bearing cup and second bearing cup interlock, such that the first bearing cup allows only a predetermined limited amount of rotational movement of the

second bearing cup, while allowing a predetermined degree of axial movement (page 2 lines 45-55).

The first bearing cup includes a plurality of circumferentially arranged slots around a perimeter portion for engaging with the teeth of the second bearing cup and visa versa.

The bearing cups include shoulders (96) extending radially inward from an inner surface, the shoulders abut the outer races.

Baninger does not disclose a generally flat spring, but does disclose a spring element in contact with both the first and second bearing cups.

Vogelsberger teaches a generally flat spring (7) to apply prestress to the bearing (col 4, lines 15-16).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Baninger and substitute a generally flat spring for the desired purpose of prestressing the bearing as taught by Vogelsberger.

Regarding claim 11, the slots are larger than the teeth, to permit the slots and teeth to interlock with each other.

Regarding claim 15, a shim (72) is disposed between the inner races.

Regarding claim 16, the bearings are secured to the cups by interference fit.

Regarding claim 32, the rolling elements comprise balls.

Regarding claim 40, the spring of Vogelsberger includes raised areas (12a, 12b) on opposite sides of the planar surface distributed at circumferential locations that are offset.

Regarding claims 43-51, the limitations of the claims are related to the function of the device, and do not impart any additional structural limitations. The device created by the combination of Baninger and Vogelsberger is capable of performing the functions as claimed, and, in fact, does perform the recited functions. See MPEP 2114.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUSTIN KRAUSE whose telephone number is (571)272-3012. The examiner can normally be reached on Monday - Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. K./
Examiner, Art Unit 3682

/Richard WL Ridley/
Supervisory Patent Examiner, Art Unit 3682